

1    **WHAT IS CLAIMED IS:**

2           1. A hand-controlled circular saw comprising:

3               a base member;

4               a universal arm pivotally mounted to a rear end of the base  
5 member;

6               a housing with a saw blade pivotally connected to the universal  
7 arm, the saw blade laterally rotatably connected to the housing and  
8 partially received in the housing, the saw blade having a first belt wheel  
9 centrally laterally extending therefrom; and

10              a drive device longitudinally mounted to the housing for  
11 driving the saw blade, the driving including:

12                      a casing securely connected to the housing;

13                      a motor securely received in the casing and radially  
14 corresponding to the saw blade along a moving direction of the saw  
15 blade;

16                      a shaft rotatably extending from the motor;

17                      a worm longitudinally secured on a free end of the shaft;

18                      a worm gear laterally rotatably mounted to the casing and  
19 engaged to the worm, the worm gear having a second belt wheel  
20 laterally centrally extending therefrom; and

21                      an endless belt mounted and surrounding the first belt wheel  
22 and the second belt wheel such that the saw rotates for cutting a  
23 workpiece due to the endless belt, the worm gear and the worm when  
24 the motor is operated.

1           2. The circular saw as claimed in claim 1, wherein the base  
2 member comprises a supporting seat pivotally mounted to a rear end of the  
3 base member and two connecting rods upwardly extending from the  
4 supporting seat, the two connecting rods forming a V-shape.

5           3. The circular saw as claimed in claim 2, wherein the universal  
6 arm comprises a first linkage set and a second linkage set respectively  
7 pivotally connected to a corresponding one of the two connecting rods of  
8 the base member for the user to conveniently operate the circular saw, the  
9 first linkage set and the second linkage set corresponding to each other.

10          4. The circular saw as claimed in claim 3, wherein:

11           the first linkage set comprises a first linkage having a first end  
12 pivotally connected to a free end of a corresponding one of the two  
13 connecting rods and a second end opposite to the first end of the first  
14 linkage, and a second linkage having a first end pivotally connected to the  
15 second end of the first linkage and a second end opposite to the first end of  
16 the second linkage; and

17           the second linkage set has a structure being the same as that of  
18 the first linkage set and comprises a first linkage pivotally connected to a  
19 corresponding one of the two connecting rods and a second linkage  
20 pivotally connected to the first linkage of the second linkage set.

21          5. The circular saw as claimed in claim 4, wherein the universal  
22 arm further comprises a connector pivotally connected to the second end  
23 of each of the second linkages of the first linkage set and the second  
24 linkage set, and the housing is longitudinally and pivotally connected to

1 the connector such that the housing is reciprocally circularly moved  
2 relative to the connector.

3 6. The circular saw as claimed in claim 5, wherein housing  
4 comprises a handle formed thereon opposite to the motor for user to hold  
5 and operate the circular saw.